AMENDMENTS TO THE CLAIMS

1. (Currently amended) A thermistor device comprising a first layer comprised of a first substance having a positive or negative temperature coefficient of resistance and a second layer comprised of a second substance having conductivity or semiconductivity and located directly on the first layer;

wherein said first substance is selected from the group consisting of vanadium oxides $(V_{(1-x)}M_x)_2O_3$ (M represents Cr or Ti, $0 \leq x \leq 0.2$).

2. (Original) The device according to claim 1, wherein said first substance is a substance having a positive temperature coefficient of resistance and having 100 mΩcm or less at operating temperature or lower.

3. (Currently amended) A thermistor device comprising a first layer comprised of a first substance having a positive temperature coefficient of resistance and a second layer comprised of a second substance having semiconductivity and formed directly on the first layer, wherein the interface between the first and second layers changes to a pn junction, as the first substance changes from being conductive to semiconductive or insulative at or near the transition temperature T_{M-I};

wherein said first substance is selected from the group consisting of vanadium oxides $(V_{(1-x)}M_x)_2O_3$ (M represents Cr or Ti, $0 \leq x \leq 0.2$).

4. (Withdrawn) A thermistor device comprising a first layer comprised of a first substance having a positive temperature coefficient of resistance and a second layer comprised of a second substance having conductivity and located directly on the first layer, wherein the interface between the first and second layers changes to a schottky barrier, as the first substance

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changes from being conductive to semiconductive or insulative at or near the transition temperature T_{M-I}.

5-18. (Canceled)

19. (Previously presented) The device according to claim 1, wherein said second substance is selected from the group consisting of n-type semiconductive oxides, p type semiconductive oxides and p- or n-type single element semiconductors.

20. (Previously presented) The device according to claim 3, wherein said second substance is selected from the group consisting of n-type semiconductive oxides, p type semiconductive oxides and p- or n-type single element semiconductors.

21. (Withdrawn) The device according to claim 4, wherein said second substance is selected from the group consisting of n-type semiconductive oxides, p type semiconductive oxides and p- or n-type single element semiconductors.

22. (Previously presented) The device according to claim 1, wherein said second layer has a thickness of 1000 nm or less.

23. (Previously presented) The device according to claim 3, wherein said second layer has a thickness of 1000 nm or less.

24. (Withdrawn) The device according to claim 4, wherein said second layer has a thickness of 1000 nm or less.

25. (Currently amended) A thermistor apparatus comprising a thermistor device and a voltage control means for controlling an applied voltage to the thermistor device, wherein said

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thermistor device comprises a first layer comprised of a first substance having a positive temperature coefficient of resistance and a second layer comprised of a second substance having conductivity or semiconductivity and located directly on the first layer;

wherein said first substance is selected from the group consisting of vanadium oxides $(V_{(1-x)}M_x)_2O_3$ (M represents Cr or Ti, $0 \leq x \leq 0.2$).

26. (Currently amended) A thermistor apparatus comprising a thermistor device and a voltage control means for controlling an applied voltage to the thermistor device, wherein said thermistor device comprises a first layer comprised of a first substance having a positive temperature coefficient of resistance and a second layer comprised of a second substance having semiconductivity and located directly on the first layer, and the interface between the first and second layers changes to a pn barrier or a schottky barrier, as the first substance changes from being conductive to semiconductive or insulative at or near the transition temperature T_{M-I};

wherein said first substance is selected from the group consisting of vanadium oxides $(V_{(1-x)}M_x)_2O_3$ (M represents Cr or Ti, $0 \leq x \leq 0.2$).

27. (Withdrawn) A thermistor apparatus comprising a thermistor device and a voltage control means for controlling an applied voltage to the thermistor device, wherein said thermistor device comprises a first layer comprised of a first substance having a positive temperature coefficient of resistance and a second layer comprised of a second substance having conductivity and located directly on the first layer, and the interface between the first and second layers changes to a pn junction or a schottky barrier as the first substance changes from being conductive to semiconductive or insulative at or near the transition temperature T_{M-I}.

28. (New) A thermistor device comprising a first layer comprised of a first substance having a positive temperature coefficient of resistance and a second layer comprised of a second

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substance having conductivity and located directly on the first layer, wherein the interface between the first and second layers changes to a schottky barrier, as the first substance changes from being conductive to semiconductive or insulative at or near the transition temperature T_{M-I};

wherein said first substance is selected from the group consisting of vanadium oxides $(V_{(1-x)}M_x)_2O_3$ (M represents Cr or Ti, $0 \leq x \leq 0.2$).

29. (New) The device according to claim 28, wherein said second substance is selected from the group consisting of n-type semiconductive oxides, p type semiconductive oxides and p- or n-type single element semiconductors.

30. (New) The device according to claim 28, wherein said second layer has a thickness of 1000 nm or less.

31. (New) A thermistor apparatus comprising a thermistor device and a voltage control means for controlling an applied voltage to the thermistor device, wherein said thermistor device comprises a first layer comprised of a first substance having a positive temperature coefficient of resistance and a second layer comprised of a second substance having conductivity and located directly on the first layer, and the interface between the first and second layers changes to a pn junction or a schottky barrier as the first substance changes from being conductive to semiconductive or insulative at or near the transition temperature T_{M-I};

wherein said first substance is selected from the group consisting of vanadium oxides $(V_{(1-x)}M_x)_2O_3$ (M represents Cr or Ti, $0 \leq x \leq 0.2$).

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